AMENDMENTS TO THE DRAWINGS

A formal drawing for Figures 1 and 2 has been made to replace the informal (marked up) drawing filed on July 27, 2007.

Enclosures: One (1) Replacement Sheet

REMARKS

Claims 1-10 are all the claims pending in the application. By this Amendment, Applicant amends claim 1 to further clarify the invention and to include the feature of claim 4 and its intervening claim 3 and amends claims 6-8 for conformity therewith. Accordingly, Applicant cancels claims 3 and 4 without prejudice or disclaimer. In addition, Applicant adds claim 11, which is clearly supported throughout the specification.

I. Preliminary Matters

Applicant thanks the Examiner for acknowledging Applicant's claim to foreign priority and for indicating receipt of the certified copy of the Priority Document.

II. Summary of the Office Action

The Examiner objected to the drawings and the specification. The Examiner withdrew the previous grounds for rejecting the claims. The Examiner, however, found new grounds for rejecting the claims. Specifically, claims 1-10 are rejected under 35 U.S.C. § 102(b).

III. Objections to the Specification

The Examiner objected to the title as allegedly being non descriptive. Applicant herein amends the title for further description. In view of this amendment to the specification, Applicant respectfully requests the Examiner to now withdraw this objection. No new matter is being added.

IV. Objections to the Drawings

The Examiner has objected to the figures because of handwritten labels. A Replacement Drawing (containing amended Figures 1 and 2) is accompanying this response. As a result, the

Examiner is respectfully requested to acknowledge receipt and indicate approval of the drawing corrections in the next Patent Office paper. No new matter is being added.

V. Prior Art Rejection

Claims 1-10 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,175.800 to Galis et al. (hereinafter "Galis"). Applicant respectfully traverses these grounds of rejection at least in view of the following exemplary comments.

Independent claim 1 *inter alia* recites: "means for inferring said policy rules to determine said commands, said policy rules comprise services rules, which create a service in the network and implementation rules, wherein said implementation rules for creating said service comprise technology rules and equipment rules, and wherein the technology rules model expert know-how and specify how to determine technology to use in the service being created based on stored attributes of equipment in the network and stored attributes of the service."

In conventional techniques, when creating a new service such as a virtual private network, the operator must decide how to implement the service and need to know specifications of each network element so that each can be programmed accordingly. In an exemplary, non-limiting embodiment, the development of the new service is facilitated by using rules. In particular, the rules for the service *i.e.* to create a new service, is applied independently of the implementation rules. In other words, in an exemplary embodiment of the present invention, service dependent issues are separated from implementation dependent issues so that the service designer does not have to attend to the implementation issues that include what technology to deploy, what sort of equipments are available, and so on. On the contrary, the new service is created via service rules by the inference engine and based on these service rules, the inference engine determines the equipment and other implementation details. It will be appreciated that

the foregoing remarks relate to the invention in a general sense, the remarks are not necessarily limitative of any claims and are intended only to help the Examiner better understand the distinguishing aspects of the claims mentioned above.

The Examiner contends that claim 1 is directed to a network management system and is anticipated by Galis. Specifically, the Examiner contends that the expert system of Galis anticipates the service rules and implementation rules as set forth in claim 1 (*see* page 4 of the Office Action). Applicant respectfully disagrees. Applicant respectfully submits that Galis does not disclose or suggest the policy rules including rules to create a service and rules that specify attributes of the service such that implementation rules for creating the service include technology rules and equipment rules, and such that the technology rules model expert know-how and specify how to determine technology to use in the service being created based on stored attributes of equipment in the network and stored attributes of the service.

On the contrary, Galis relates to a configuration expert system and a configuration database system which provides the means for a complete reconfiguration of the communications networks. In Galis, a human user defines and maintains a communications network requirements database for reconfiguration of a communications network. Further, a human user defines and maintains a network configuration database for the physical and logical layers of a network. In Galis, a communications network configuration database is generated and network loadable configuration data for the communications network is produced. The expert system of Galis validates the human user's requirements or changes to requirements for the communications network and produces an expert configuration data set of options for the full and partial configuration tasks of a communications network (*see* Abstract and col. 5, lines 36 to 60). In other words, in Galis, the expert system simply validates user requirements and does not create a

new service. For example, Galis discloses that expert systems act as an intelligent assistance to human experts, as well as assisting users who otherwise might not have access to expertise (col. 42, lines 40 to 46).

In Galis, to create a new network, the Network Utilities menu 1802 is selected from the main menu 1502, and the Create Network function is selected. The human user 912 is next prompted for a network name. When this name is entered a blank communication network database is created and is ready for human user 912 input. At this point the human user 912 can proceed to enter or update network data to create an working memory (working database 906). Working database 906, consists of network requirements information and network configuration information. A human user 912 supplies certain basic network parameters, and the expert system 918 creates the rest. The information base is shared between the expert system 918 and the human user 912. The user supplies the network requirements information (A) and may supply (partly or completely) the communications network configuration information (B). The following items comprise the network requirements: 1. A name and type of each node; 2. A name and type of feeder multiplexer; 3. A name and parameters of each composite link; 4. Descriptions of the network's end connection points. The end points may be described individually or in groups; 5. Description of devices used for the end connection points; and 6. Permanent connections between end points. In other words, Galis discloses that the expert system cooperates with the user in the configuration process rather than presenting him with a "take it or leave it" solution typically supplied by conventional network configuration techniques. Furthermore, Galis discloses that the complete configuration may be created on its own, if this is what the user wants. It will also allow the user to define the configuration so as to

specify that certain elements of an existing network configuration are to be left unchanged (Fig. 9C; col. 46, line 40 to col. 47, line 52).

In other words, Galis discloses an expert system for creating configuration information for a user-defined network. That is, Galis does not disclose or suggest creating a new service via the expert system. Furthermore, with respect to the implementation (*i.e.*, creating a new communications network), in Galis, the user has to specify equipment and its attributes and other network information (col. 47, lines 25 to 52). In Galis, the expert system will use this user input information to create a description of the network configuration. In Galis, there is no disclosure or suggestion of having technology rules that will determine technology to use in creating a service and equipment rules that will select equipment to use for the service. In Galis, just like in conventional techniques, the user needs to know the equipment and technology to use, whereas the configuration details are provided by the expert system. In short, Galis fails to disclose or suggest creating a service via the service rules and creating a service with technology and equipment rules that determine technology to use.

Therefore, "means for inferring said policy rules to determine said commands, said policy rules comprise services rules, which create a service in the network and implementation rules, wherein said implementation rules for creating said service comprise technology rules and equipment rules, and wherein the technology rules model expert know-how and specify how to determine technology to use in the service being created based on stored attributes of equipment in the network and stored attributes of the service," are not disclosed by Galis, which lacks having rules that create a service in the network and implementation rules that include technology and equipment rules that determine technology and equipment to use in the creation of the service. For at least these exemplary reasons, claim 1 is patentably distinguishable from

Galis. Accordingly, Applicant respectfully requests the Examiner to withdraw this rejection of claim 1 and its dependent claims 2 and 5-10.

Dependent claim 5 recites: "wherein the service rules are provided externally from the network management system and wherein the service rules specify conditions and timing for creating the service." The Examiner contends that col. 5, lines 38 to 45 and col. 9, lines 30 to 45 of Galis disclose the above-quoted unique features of claim 5 (*see* page 5 of the Office Action). Applicant respectfully disagrees.

Col. 5, lines 38 to 45 of Galis recite:

> The present invention comprises a communications network configuration expert system and method and a communications network configuration database system and method. The expert system of the present invention, operating either jointly or separately from the database system of the present invention, provides the means for a total communications network configuration.

Col. 9, lines 30 to 45 recite:

> An expert system is a computer system that contains knowledge about a particular field and emulates the reasoning processes of human experts. Expert systems techniques are beginning to be applied to real problems in industry. The process of building an expert system is often called knowledge engineering. It typically involves a special form of interaction between the expert system builder, called the knowledge engineer, with one or more human experts in the problem area (domain of discourse). The knowledge engineer "extracts" from the human experts their procedures, strategies, and rules of thumb for problem solving, and builds this knowledge into an expert system. The result is a computer system that solves problems in the domain of discourse in much the same manner as an human expert.

As is clearly visible from the above-quoted passages of Galis, there is no disclosure or suggestion of the service rules being provided externally from the network management system

and the service rules specifying conditions and timing for creating the service. Since Galis only discloses the general concept of expert systems, the rejection is improper as it lacks "sufficient specificity" required under 102. "[A]nticipation under § 102 can be found only when the reference discloses exactly what is claimed and that where there are differences between the reference disclosure and the claim, the rejection must be based on § 103 which takes differences into account." *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985); MPEP § 2131. Therefore, for at least this additional exemplary reason, Applicant respectfully submits that claim 5 is patentably distinguishable from Galis.

Dependent claim 7 recites: "wherein the service is created via the service rules independently from specifications of equipment and technology specified in the implementation rules and wherein the implementation rules are dynamically implemented after the determining means determines applicable implementation rules." The Examiner alleges that col. 9, lines 30 to 45, col. 13, lines 11 to 17 and lines 21 to 33, and col. 17, lines 58 to 63 of Galis disclose the above-quoted unique features of claim 7 (*see* page 5 of the Office Action). Applicant respectfully disagrees.

Col. 9, lines 30 to 45 of Galis have been quoted above and simply disclose the general concept of an expert system. Col. 13, lines 11 to 33 of Galis recite:

> A Knowledge Base 904, which stores a set of rules (production rules) in the production memory. Each rule has a conditional part, which indicates the working database 906 status in terms of working elements for which the rule is applicable, and an action part, which indicates the changes to the working database 906 which can be implemented by the rule.
>
> In the present invention, rules are the main locus of the configuration domain knowledge for the communications network.

> In the present invention the production rules in the knowledge base 904 are conceptually grouped into 12 coupled and interrelated modules, as shown in FIG. 35, and as described below in Section III.B.1. Each module of knowledge base 904 represents one stage of the configuration process knowledge for the communications network 500 (emphasis added).

Similarly, col. 17, lines 58 to 63 of Galis recite:

> Configuration Database 914 maintains complete information on the physical/hardware inventory of a communication network 500, as well as information on the logical aspects of the communications network 500 and its corresponding relationship with the physical network 920.

As is visible from the above-quoted passages of Galis, there is no disclosure or suggestion of the service rules being independent from the implementation rules and the implementation rules being dynamically implemented.

Therefore, for at least these additional exemplary reasons, Applicant respectfully submits that claim 7 is patentably distinguishable from Galis.

VI. New Claims

In order to provide more varied protection, Applicant adds claim 11, which is patentable by virtue of its dependency and for additional features set forth therein.

VII. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. **If any points remain in issue, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below to set up an interview**.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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